

Claims

1. Method for producing an irreversible storage medium comprising an array of memory cells (3), each memory cell (3) comprising one zone (10) of an active layer (8) arranged between first (1) and second (2) conductors, binary information stored in the memory cell (3) being determined by the electrical conducting state of the corresponding zone (10), method characterized in that it comprises assembly of a blank storage medium having an active layer (8) which is in an initial insulating state, production of a stamping die (17) having a stamping pattern that corresponds to the information to be stored, and stamping of the storage medium using the stamping die (17) so as to make predetermined zones (10) of the active layer (8) electrically conductive by means of localised plastic deformation (4).
2. Method according to claim 1, characterized in that the active layer (8) is formed by a charged resin.
3. Method according to one of the claims 1 and 2, characterized in that assembly of a blank storage medium successively comprises

 - deposition, on a substrate (5), of a first conducting layer (11) and of two oppositely doped semi-conducting layers (6, 7),
 - etching of the stack formed by the first conducting layer (11) and the two semi-conducting layers (6, 7), so as to obtain a first array of parallel strips (13),
 - filling the space between the strips (13) of the first array of parallel strips (13) so as to create a common plane with the strips (13) of the first array of parallel strips (13),
 - deposition of the active layer (8) on said common plane,
 - deposition of a second conducting layer on the active layer (8),

- etching of the second conducting layer, so as to obtain a second array of parallel strips perpendicular to the strips (13) of the first array of strips (13),
- filling the space between the strips of the second array of parallel strips.

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4. Method according to claim 3, characterized in that the space between the strips of the first and/or second array of parallel strips is filled by means of a technique using a planarization resin (12, 9).

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5. Method according to claim 3, characterized in that the space between the strips of the first and/or second array of parallel strips is filled by means of a mechanical-chemical polishing step.

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6. Method according to any one of the claims 1 to 5, characterized in that production of the stamping die (17) successively comprises

- deposition of a photoresist (14) on an intermediate substrate (15),
- etching, in the photoresist (14), of an array of elementary zones (16) having a configuration corresponding to the stamping pattern,
- electrolytic deposition, on the intermediate substrate (15) and the photoresist (14), of a metal constituting the stamping die (17),
- detachment of the stamping die (17) from the intermediate substrate (15),
- removal of the residues of photoresist (14) from the stamping die (17).

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7. Irreversible storage medium, characterized in that it is obtained by means of a method according to any one of the claims 1 to 6.